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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/713,406 | CANTRILL, BRYAN M. | |
| | Examiner Thai Van Pham | Art Unit 2191 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 10/17/2006.
2. The allowed claim(s) is/are 1,2,9-15,17-19,22-29 and 32.
3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
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DETAILED ACTION

1. This office action is in response to amendment filed on 10/17/2006.
2. Per Applicant's request, the Specification has been amended.
3. Per Applicant's request, Claims 3 – 8, 16, 20, 21, 30, 31, and 33 have been cancelled.
4. Per Applicant's request, Claims 1, 2, 13, 17 – 19, 22 – 25, 28, 29, and 32 have been amended.
5. The 35 U.S.C. 102(e) rejections of claims 1, 2, 9, 17 – 19, 23 – 26, and 32 are withdrawn in view of Applicant's amendment and persuasive argument.
6. The 35 U.S.C. 103(a) rejections of claims 10 – 15, 22, and 27 – 29 are withdrawn in view of Applicant's amendment and persuasive argument.
7. Claims 1, 2, 9 – 15, 17 – 19, 22 – 29, and 32 are allowed.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ally Dosa (Reg. No. L0031) on 10/30/2006 to obviate any potential issues and to put the claims in condition for allowance. The language in claim 17 has been changed, in the

examiner's amendment, from "the state" to "a state" to properly identify the state value recited in the claim.

8. The application has been amended as follow:

The following currently amended claim(s) replace all previously present claim(s)

In the claims:

17. *(Currently amended) A system for tracing using a tracing framework, comprising:*

a plurality of probes executing on the tracing framework, wherein each of the plurality of probes is associated with a speculation;

a first principal buffer configured to store data from the tracing framework and associated with a first processor, wherein data is traced from the first processor using one of the plurality of probes; and

a first speculative buffer associated with the first principal buffer and configured to transfer data to the 1st principal buffer, wherein the first speculative buffer is allocated using one of the plurality of probes, and wherein the data traced from the first processor is stored in the first speculative buffer; and

wherein the data from the 1st speculative buffer is committed to the first principal buffer if one of the plurality of probes comprising a commit function is encountered;

wherein the data from the 1st speculative buffer is discarded if one of the plurality of probes comprising a discard function is encountered; and

wherein the a state value associated with the speculation is updated upon firing at least one of the plurality of probes.

9. The following is an examiner's statement of reasons for allowance:

The closest cited prior arts, cited below, disclose various ways of storing and retrieving traced program data to and from memory buffer(s).

- Dynamic Instrumentation Event Trace System and Methods by **Bunnell**

discloses dynamic instrumentation of a computer to collect event data by inserting an instruction at a program trace point;

- Methods and Apparatus for Accessing Trace Events by **Zahavi et al.** discloses mechanisms and techniques to retrieve trace data from a trace buffer residing in a data storage system;

- Efficient Memory Allocation Scheme for Data Collection by **Chen et al.**

discloses efficient memory allocation using a small on-chip buffer in combination with external system memory to store collected data.

However, none of them discloses a tracing mechanism that associates a state value with the determination of whether to commit in a temporary buffer to a principle buffer or discard data in the temporary buffer based on the function of an encountered probe as recited in independent claims 1, 17, and 32.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Van Pham whose telephone number is (571) 270-1064. The examiner can normally be reached on Monday - Thursday, 8am - 3pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TVP
10/27/2006


Wei Y. Zhen
Supervisory Patent Examiner